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ABSTRACT

The effect of enrollment level changes on the long-range future of Western Washington University are investigated. Due to the high rate of Washington state in-migration, declining enrollments are not projected for Western Washington University. The impact of managed enrollment goals was examined to help the university determine the most appropriate enrollment level. Data from a sociopolitical survey of faculty and administration were used to compile five possible scenarios of development for the university. Significant trends that were identified by the survey and used in the development of the models include: rate of technological change; development of new energy sources; percentage of women entering the workforce; Washington state in-migration; frequency of midcareer job changes, competition to attract students, and competition among institutions for financial resources. The models are based on five different enrollment levels: 8,000; 10,000; 12,000; 15,000; and an unregulated level (projected at 11,100). The eight areas of data in each model, based on three-year averages, include: operating budget, student credit hours, full-time equivalent faculty, administrative exempt positions, classified staff positions, dormitory occupancy, library acquisition funds, and facilities. The five models discuss possible program impacts related to enrollment increases or decreases. An estimate of the amount and rate of growth or decline of those programs most likely to be affected by enrollment changes is included. The implications of managed enrollment goals for the admissions process and the quality of education are also discussed. The importance of planning for change and redistribution of resources is emphasized. (SF)

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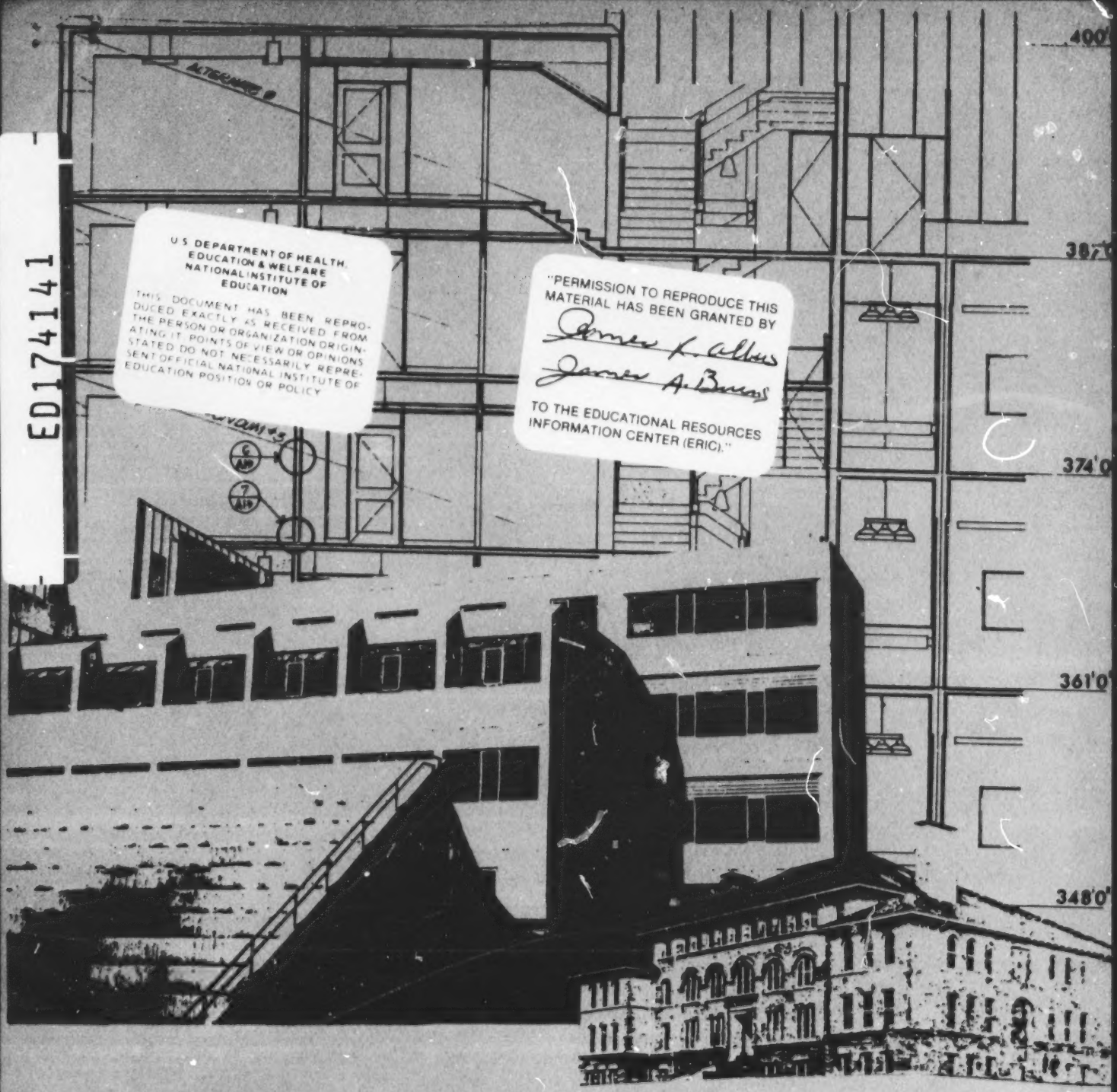

ENROLLMENT MANAGEMENT STUDY: FIVE SCENARIOS

HE 011 547

WESTERN WASHINGTON UNIVERSITY

ENROLLMENT MANAGEMENT STUDY:

FIVE SCENARIOS

James R. Albers
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Office of Institutional Research
Western Washington University
May 1979

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INTRODUCTION

During Fall Quarter of 1978 the issue of future enrollment levels at Western Washington University was raised in several committees and before the Board of Trustees. The purpose of this study, prepared at the request of the Planning Council and President Olscamp, is to contribute to the discussion of that issue by presenting the probable effects on key variables of several enrollment levels at Western between now and the 2000-2001 academic year. Basic constraints and assumptions will be detailed later; however, several points need to be made at the outset.

At most colleges and universities, planning has traditionally been a short-term (1 to 5 years) endeavor. Longer-range planning (10 to 20 years) is not an easy activity for any organization, and it is even harder for institutions of higher education since they face special problems because of the changing role of higher learning in society, the uncertain patterns of student interest, and the variability of public commitment.

Long-range forecasting is, at best, an imperfect art.[1] One of the most common methods used, trend analysis, consists primarily of projecting historical data forward. Using that method, the further ahead one tries to plan, the less reliable that plan will be. An alternate method, which will be used here, is to develop scenarios of possible futures, including how they are to be achieved, as a basis for contingency planning. The advantage of this method is that within reasonable constraints it allows the institution to choose its future rather than accept a continuation of the present.

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[1] "This foolish idea of shooting at the moon is an example of the absurd length to which vicious specialization will carry scientists...the proposition appears to be basically impossible...." Prof. A.W. Bickerton, 1926, quoted in The Futurists, p. 137, Ed. Toffler, Random House, New York, 1972.

This study contains scenarios for five enrollment levels: 8,000, 10,000, 12,000, 15,000 as managed enrollment goals, and an unregulated level, which is a continuation of present policies and is now projected to result in a maximum enrollment of 11,100. Enrollment of "annual average" headcount students was chosen as the primary variable because that figure currently has the largest impact on Western's funding. The methodology used relies heavily upon formula funding techniques and is admittedly a simplification. Our intention is to provide an illustration of the effects of changes in enrollment upon key variables at Western. This study should serve as the basis for further discussion and provides a series of base points from which other possible futures may be developed. Each scenario includes comments concerning the factors which could effect changes in the figures presented and a description of various policies that could be used to meet the given enrollment goal.

Western's present admissions policy essentially sets a standard and guarantees admittance to those who meet it. We study trends in state population to try to anticipate what proportion of the college-age population from each county will attend Western given present admissions standards. The Office of Fiscal Management uses a similar method and the results have proven to be reasonably accurate. This methodology provides the base number for Scenario III, our "unregulated" scenario. "Unregulated" means we continue doing what we are doing now, i.e., there is no attempt to regulate enrollment. The other scenarios require conscious regulation of enrollments and adoption of new policies to achieve the desired enrollment level.

One truism should be remembered: not to decide is, in fact, to decide. We have an obligation to consider the implications of various enrollment levels in terms of both our responsibilities to the citizens of Washington State and our obligations as professionals to provide the best education possible. Changes will come and will affect us whether we plan or not, but planning

allows us to anticipate those changes and to carry out the redistribution of our resources required to accommodate adjustments in our curriculum, programs, faculty, and staff.

FACULTY QUESTIONNAIRE FOR FUTURE PLANNING

The five scenarios in this study are provided as possible future views of Western. To assist in developing them we conducted a socio-political survey of Western's faculty and administration to obtain part of the information used in establishing the background of trends and their possible impacts, and how they could influence planning at Western.[2] In general, the survey indicates a high degree of congruence between faculty and administrative viewpoints. One of the most significant views shared by Western's faculty and administration is that rapid increases in communications and computer technology will provide interactive access to information in many locations and will have a major impact on society. Other trends with both significant increases and major impacts that they foresee include: rate of technological change, development of non-fossil energy sources, percentage of women entering the work force, Washington State in-migration, frequency of mid-career job changes, competition for students, and competition among postsecondary institutions and other social and cultural institutions for financial resources.

When asked specifically about Western as it is perceived now and as it should be in the year 2000, the survey's respondents indicated that they would like enrollment to go up only slightly and that our identity should be more

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[2] The methodology was based on principles developed by Ian H. Wilson, "Socio-Political Forecasting: A New Dimension to Strategic Planning" in the Michigan Business Review, July 1974, University of Michigan, Ann Arbor, and expanded upon by Jack Burnett in a paper presented at the Society for College and University Planning's 13th Conference in 1978. The method, one variation of the widely used Delphi technique, is similar to the College Board's methodology in its "Future Directions for a Learning Society" project.

national but our teaching/research mix should be unchanged. Few major shifts were indicated, and apparently people generally like the University the way it is now. The only major shift was toward teaching more adult students and having fewer 18-25 year-old high school graduates as a service population. (This was indicated as a trend in two sections of the survey.) All respondents felt that Bellingham and Whatcom County would see major population gains--and many expressed their sorrow concerning this trend. On the strength of the survey the respondents' recommendations would seem to be to preserve Western pretty much the way it is while planning for an older, more career-oriented student body. This implies more emphasis on life-long learning and some variations in scheduling to meet the needs of working adults.

Trends in academic areas were felt to be generally positive with modest increases in departmental research and some change in instructional techniques, but these changes were judged to have limited impact. Growth in the College of Business and Economics was judged to have the greatest impact on other areas.

The survey draws a rather interesting picture. The State's population is seen as increasing, as is the population in Bellingham and Whatcom County, at a greater rate than our population models predict. We are seen as shifting our efforts toward serving older students. At the same time we are seen as having more competition for both students and resources, while taxpayers become less willing to support present public spending levels. This is not the kind of background that would indicate Western will be able to move easily into the 21st century and maintain its present character.

While it is recognized, then, that powerful social and economic forces are at work which are likely to change the nature of Western, there is a desire to preserve Western the way it is now. There is a certain cognitive dissonance

in these views. This is a difficult, but not impossible, goal if it is actually what the majority of the community wants. It will, however, require careful management of resources and conscientious efforts to develop institutional priorities that preserve those things which make Western the type of institution it is today.

Although we face an uncertain future, several trends are now apparent: our average student age is going up, students are taking more than four years to achieve their degrees, women are enrolling in increasing numbers and are training for careers in traditionally male areas. These and other trends will require some response, and if we do not provide leadership in changing to recognize them someone else certainly will.

Consider some present developments that will be part of our complex future world: the technology exists today to develop very cheap two-way audio and visual communications between any two points in North America; all that is needed is a stable orbiting satellite network, something which the Space Shuttle will be able to position and maintain.[3] More adults are involved in formal education programs every year and often these programs are corporate-sponsored or otherwise developed outside of formal higher education. According to a recent Carnegie Report[4] during the next ten years new doctorates are projected at 400,000 while new hires of doctorates in academic positions are projected at 80,000, or 20% of those available. This leaves a large number of potential academics, plus a service population not always well served by current methods, and a technological means of bringing them together cheaply. Individual teachers

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[3] Treatments of this trend can be found in two current periodicals: Corporate Star Wars: AT&T vs. IBM" by Vivienne Killingsworth in Atlantic May 1979, and "Cable TV: The Lure of Diversity," Time, May 7, 1979, pgs. 82-87.

[4] Fernandey, Luis, U.S. Faculty After the Boom: Demographic Projections to 2000, Carnegie Council on Policy Studies in Higher Education, April 1978.

could contract directly with students to provide them electronically with instruction in their homes. Work on this campus through the Association for the Development of Computer-Based Instructional Systems is another example of trends that present an electronic classroom as something well beyond the viewing of a video-taped lecture.

These are some examples of the new groups and delivery systems which may be in competition with traditional universities. The extent of these changes is still unclear. There is, however, already enough evidence to show that in the future large numbers of people will be obtaining higher education outside of the university setting.

NATIONAL AND STATE TRENDS

There is a considerable amount of literature concerning the future trends of present events and possible alternative futures.[5] Much of the literature is contradictory, is based on past predictions of the future, and is likely to turn out to be incorrect.[6] This study makes no pretense of having any special knowledge in this area. It is important, however, that potential social and economic changes be kept in mind when reviewing the scenarios.

Western is part of the larger world. Events in Whatcom County, Washington State, the United States, and the rest of the world can and will affect our future. The scenarios were developed using the economic concept of ceteris paribus, "all other things being equal", but many circumstances could impact our planning. Continued high inflation raises our program costs and makes it more difficult for students to afford a college education. Although a recession or depression could bring about short-term enrollment gains since educational improvement has often been preferred to unemployment, a continuing

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[5] Cf. Selected Bibliography

[6] Cf. Footnote 1.

depression could have only negative effects. The share of the Washington State budget which goes to higher education has declined in the last 10 years from approximately 22% to approximately 16% even without a depression. This indicates changes in social priorities away from higher education. If this continues, funding problems would be even more severe than they are at present.

Because of substantial in-migration (approximately 100,000 in 1978), the effects of the reduction in the size of the 18-25 age cohort on college enrollments, already felt nationally, have not yet occurred in Washington State. In-migration is a sensitive function of the State's economy. Fortunately, the Boeing Company, one of the primary drivers of the State's economy, has enough backorders to maintain production through the decade of the '80s. This should help to stabilize the State's economy over that period, which in turn should continue to promote further in-migration and, in turn, should mitigate the size of any potential enrollment decrease. A sustained national economic downturn, however, could eventually undermine the present strength of the State's economy. It should also not be forgotten that the costs of jet fuel rise with other petroleum products and that the politics of oil could have a negative impact upon our present optimistic viewpoint.

In short, while our constraints and assumptions include the premise that the external world will remain stable and continue current trends, we remain aware that this is only a limitation imposed for predictive purposes. As external events occur which can affect us, they will be included in our continuing planning efforts.

SCENARIO INTRODUCTION

The methodology used in this study is to construct five different models of Western based on five different enrollments and the general assumptions and constraints discussed above. Since modeling is a technique for describing or

representing an activity or object, usually mathematically, so that the most important functions or characteristics can be viewed and understood, it is partly subjective. (What is important? How many characteristics are enough for "understanding"?) When the organization being modeled is as complex as a modern university with its diverse and often undefined goals, the only objective factors easily available for modeling criteria become those factors which can be quantified. Student credit hours, faculty positions, classroom square footage, and dollars spent are used in models of universities because changes in them can be easily documented and understood. The resulting model is only one view of the complex reality which makes up an institution, and it should be used as a tool--a means of understanding the way that some elements of the institution can be affected by changes and a starting point for a larger discussion of institutional dynamics. This study's scenarios are models of the way that some key variables at Western could be affected by various levels of student enrollment. The scenarios have made use of many assumptions and projections which must be reviewed if the scenarios are to be understood.

BASIC CONSTRAINTS AND ASSUMPTIONS OF THE SCENARIOS

The eight areas of data in each scenario are based on three-year averages of available data because of the assumption that more recent information better reflects a changing environment. The three-year base also tends to provide a more conservative set of figures than a five- or ten-year base. An alternative set of scenarios could be developed using moving or weighted averages of the data, either for all variables or for specified combinations.

Operating Budget is derived from average costs per headcount student ($3002.70) corrected to 1978 dollars according to the following inflation rates: 1975, 10.11%; 1976, 5.58%; 1977, 7.96%; 1978, 12.44%.

Student Credit Hours (SCH) are produced by multiplying the annual average student headcount by the average credit hours per student.

Full Time Equivalent Faculty (FTEF) is determined by dividing the SCH by average student credit hours per faculty position, 278.28 (SCH per FTEF position). This relationship varies every quarter and would certainly change during increases or decreases in enrollment as the size of the faculty is adjusted over time to compensate for a new student base or changes in academic programs.

Administrative Exempt Positions have been relatively stable but could be affected by changes in the University's organizational structure. The average historical ratio of headcount students to FTE positions (145.92 to 1) was used to compute these data.

Classified Staff Positions have increased substantially in recent years and are dependent upon the number and maintenance requirements of campus buildings, as well as upon factors more directly related to enrollment. The numbers of positions are the sum of facilities-dependent positions, held constant at 335.05 for Scenarios I through IV, and instruction and student services positions computed on the basis of a historic ratio (52.08 to 1). For Scenario V the base was increased to 474.52 in order to reflect the substantial construction in that scenario.

Dormitory Occupancy is the annual average student headcount times the average occupancy rate in university housing of headcount students (36.9%).

Library Acquisition Funds are computed using average dollars per student ($56.15) corrected for inflation. According to our policy of holding other variables constant in this study, we assume the same number of academic programs, thus these figures provide an indication of monies available only to update and maintain the present collection. More academic programs would, of course, require larger library expenditures.

Facilities are determined by square footage requirements for each basic type of space. These were developed by the Planning Office using standard formula calculations.

Each scenario shows how the above factors will have to change to achieve the given enrollment level. A base point "scenario" precedes the five scenarios so that each future figure can be compared to the 1978-79 actual.

There is much more to Western, however, than a dry set of statistics. For several years the University has had the services of a Long Range Planning Committee (LRPC), now the Planning Council (PC), which has formal procedures for resource reallocations and for program development. The PC maintains a comprehensive plan for the University which is updated annually by all academic units. The assumptions upon which the comprehensive plan was created are used as the criteria for our unregulated scenario, Scenario III. Also, unless otherwise stated, the assumption policies and caveats of the Western Washington University Comprehensive Plan Update, Planning Assumptions and Policies, adopted by the LRPC on April 6, 1978, are assumed to be in effect. Statewide policies have been taken from Planning and Policy Recommendations For Washington Postsecondary Education: 1976-1982, published by the Council for Postsecondary Education in May of 1976. The five scenarios discuss possible program impacts

related to enrollment increases or decreases. In particular, this includes an estimate, based on present information, of the amount and rate of growth or decline of those units most likely to be affected by enrollment changes.

In the high enrollment scenarios additional space needs are analyzed: additional classroom and laboratory space, new dormitory space, and new library facilities. Since Western's present utility infrastructure is designed to support a campus of approximately 15,000 students, no new facilities of this type are necessary in any of the proposed scenarios.

Each scenario has implications for admissions that can be found in the body of the scenarios. Managed enrollment goals may change the nature of the admissions process, with lower enrollment levels requiring more selectivity and a recurrence of the 1960s situation when "just and equitable" admissions policies were debated. There is also a possibility of affirmative action programs being set back or challenged.

Higher enrollment levels might bring into question Western's educational quality. We are now well thought of by potential students. Lower admissions standards might reduce Western's attractiveness and, therefore, in themselves may make it more difficult to attract more students.

Another factor which affects enrollment is the availability of student financial aid. Allocation of National Direct Student Loans (NDSL), Supplemental Educational Opportunity Grants (SEOG), and College Work-Study (CWSP) is based primarily upon the utilization of these funds at the institution two academic years prior to the year in which the funds are requested. Currently, distribution of these funds is made on the basis of prior year's utilization and is not responsive to significant changes in institutional enrollment. Current allocation methods are, however, being used on an experimental basis and may change in the future.

Distribution of Basic Educational Opportunity Grant (BEOG) funds is more directly related to enrollment since the program includes an "entitlement" concept which assures that any eligible student enrolling at Western who applies for BEOG funds will receive them. The Washington State Need Grant (WSNG) program also embodies a limited entitlement concept, and all students enrolling at Western who meet the eligibility criteria and apply properly receive a WSNG.

Washington State's three percent Tuition and Fee Waiver (T&F/W) program is also responsive to enrollment levels in that the institution is authorized to waive up to three percent of the total tuition and fees collected for distribution to needy students.

During 1978-79 Western will have approximately $3,500,000 in state and federal student aid funds to distribute to students, of which slightly more than $2,000,000 or approximately 57 percent is federal college-based student aid funds (NDSL, SEOG, CWSP) not currently subject to reductions or increases in response to enrollment changes. The balance of the state and federal funds is made up primarily of approximately $1,000,000 in BEOGs, which are subject to increases or decreases in relation to enrollment changes; approximately $300,000 in WSNGs, which are responsive to enrollment changes; and approximately $135,000 in T&F/Ws, the level of which is related to enrollments or, more specifically, the amount of total tuition and fees collected.

A final category to consider is the physical plant. Each scenario provides figures for the required square footage increases and the related costs in 1979 dollars, amounts developed from standard methods of physical plant space projection. Based on present space utilization rates and funds available for capital projects, however, it is our assumption that Scenarios I-III could be realized without major new construction, that Scenario IV might require one new academic building, and that only Scenario V would require major construction.

The one exception is library space. Unless there are innovations in information storage techniques, Wilson Library will have growing space requirements at any enrollment level. This is because the library develops its collection to serve academic programs, and much of the same materials are required whether a program serves 10 students or 100. Even if the number of academic programs is unchanged, new library materials and periodicals will accumulate over time and more space will be needed. If the number of academic programs increases, which is likely, then the library's requirements for space are simply accelerated. In all cases, we will need to provide more space for our library.

Office space was excluded from our documentation since according to the formula we have adequate space for all scenarios. Physical education space is reported according to a formula which includes all use of the PE facilities and not just academic use. This was judged to reflect more properly the way Western's facilities are utilized. In the "Summary and Conclusion" section of this study, Table II summarizes the capital budget implications for all five scenarios.

BASE POINT "SCENARIO": 1978-79 ACTUAL

Enrollment Level: 9663 Annual Average Headcount Students
These data characterize actual information concerning the 1978-79 academic year.

OPERATING BUDGET

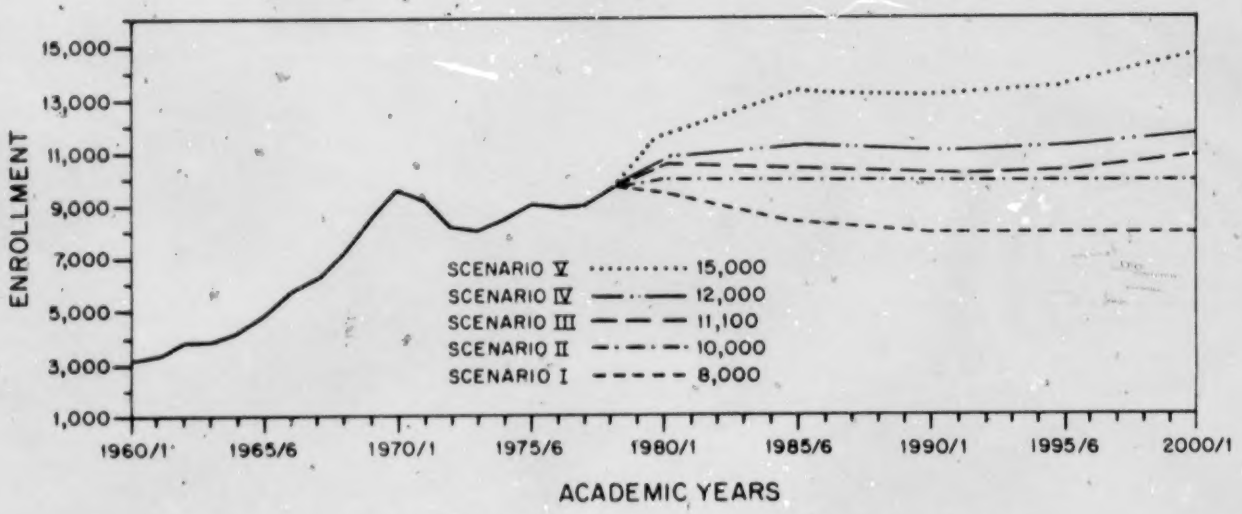
Instruction	$15,368,000
Research	70,000
Public Service	67,000
Primary Support Serv.	981,000
Libraries	1,845,000
Student Services	1,906,000
Institutional Support	3,545,000
Plant Oper. & Maint.	3,469,000
Sponsored Research	2,365,000
TOTAL	$29,616,000

Student Credit Hours generated	134,617
Full Time Equivalent Faculty positions	464.58
FTE Classified Staff positions	513.34
FTE Administrative Exempt positions	64.19

Dormitory Occupancy	3620
System Capacity	3713
Spaces Required (surplus)	(93)

Library Acquisition Funds - $528,080

HISTORICAL AND PROJECTED ANNUAL AVERAGE ENROLLMENTS



SCENARIO I. ENROLLMENT LEVEL OF 8,000

This scenario would require a reduction of approximately 1,600 students from the 1978-79 level. The following data characterize this scenario.

OPERATING BUDGET

Instruction	$12,388,000
Research	50,000
Public Service	60,000
Primary Support Serv.	783,000
Libraries	1,525,000
Student Services	1,489,000
Institutional Support	2,827,000
Plant Oper. & Maint.	2,861,000
Sponsored Research	2,037,000
TOTAL	$24,020,000

CAPITAL CONSTRUCTION

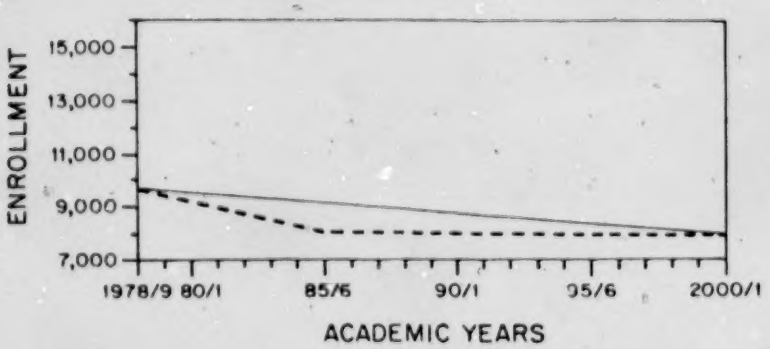
Space Type	Square Footage Required	Cost
Library	46,235	$ 3,611,000
TOTAL		$ 3,611,000

Dormitory Occupancy	2952
System Capacity	3713
Spaces Required (surplus)	(761)

Library Acquisition Funds --$449,223

Student Credit Hours generated	109,580
Full Time Equivalent Faculty positions	393.77
FTE Classified Staff positions	487.66
FTE Administrative Exempt positions	54.83

PROJECTED ANNUAL AVERAGE ENROLLMENTS



By setting admissions standards that reduce our entering students to roughly 70% of the proportion we currently draw within seven specific age groups in all of the counties in the state, we could drop to an enrollment of 8,000 by the 1989-90 academic year. Standards would then have to be adjusted in order to maintain that enrollment. The solid line indicates the shortest time in which the faculty could be decreased by attrition.

COMMENTS

This administratively possible enrollment level implies a change in Western's role as part of the Washington State higher education system. By setting higher standards we are implying that Western is a high quality institution. It can be argued that this standard will provide a significantly better education to those who are admitted by permitting faster-paced courses and by developing a more stimulating educational environment. This, in turn, can be argued to conform to State goals of responsiveness, access, and diversity, because we would be meeting the needs of the State's brighter students and providing them access to a special kind of education. Both faculty and staff would certainly be reduced, resulting in an extremely high tenure rate and

little opportunity to acquire new faculty. The physical plant would be unchanged and lower utilization rates would preclude any major capital improvements. However, dormitory occupancy would still be adequate to meet our bonding requirements and minor renovations might still be expected to be made.

A decrease in the college-going rate of high school seniors, a reversal of state trends, or a policy shift in Olympia are examples of outside factors that could also bring about this enrollment level. Increased community college development with strong program interfaces or challenges could also cause this lowered enrollment level to be considered.

It is assumed that personnel reductions would occur through natural attrition. This could cause planning problems since attrition is not controlled and does not always occur in the desired unit. This means that it may take a considerable amount of time to reach a satisfactory equilibrium at this level, as can be seen on the graph.

The simplest way of maintaining this enrollment level would be by adhering to published application deadlines. The disadvantage of this method of control, of course, would be that it would result in admission being offered to the earliest rather than the best qualified applicants. Another method of control would be to raise the grade point average required for admission. In Fall Quarter 1978, for example, 1,651 high school graduates enrolled in the freshman class. If the required grade point average were raised from 2.50 to 3.00 only 1,152 would have been eligible for admission, reducing total enrollment from 9,800 to 9,301. There were 1,296 entering transfer students. If the required transfer grade point average were raised from 2.00 to 2.50, only 1,004 would have qualified, further reducing the total enrollment to 9,010 students. Adhering to the September 1st published application deadline would have resulted in a total enrollment well under 9,000 students. Other methods of academic quality control could be the requirement of certain high school subjects and minimum test scores.

Retention policies could be used as an alternative method of controlling enrollment. Large freshman classes would still be admitted, but students would be exposed to a more rigorous curriculum. Only the best students would be allowed to continue their enrollment. A variation on this basic method could include a change in grading standards. Increasing program requirements or difficulty, for example in General University Requirements, might also result in reductions in enrollment.

Financial aid funds would remain at $2,000,000. Assuming the economic profile of enrolled students remained parallel to our current enrollment, we would have fewer students sharing in the college-based funds available. We would expect proportionate reduction in the dollar amounts of assistance received by students through BEOG and the WSNG programs which are more directly related to enrollment levels.

Since we already have adequate financial aid resources to accept applications from students almost continuously throughout the academic year, this lower enrollment level with increased availability of student aid resources in proportion to enrolled students would not necessarily result in any proportionate change (increase) in our financial aid population, but it would probably allow us to increase the level of gift aid to our recipients from the approximately 50% of college costs at the current time to 55% or 60%.

SCENARIO II. ENROLLMENT LEVEL OF 10,000

This scenario assumes an enrollment level which it is presently projected will be attained in the 1980-81 academic year. The following data characterize this scenario.

OPERATING BUDGET

Instruction	$15,485,000
Research	63,000
Public Service	75,000
Primary Support Serv.	979,000
Libraries	1,907,000
Student Services	1,862,000
Institutional Support	3,534,000
Plant Oper. & Maint.	3,576,000
Sponsored Research	2,546,000
TOTAL	$30,027,000

CAPITAL CONSTRUCTION

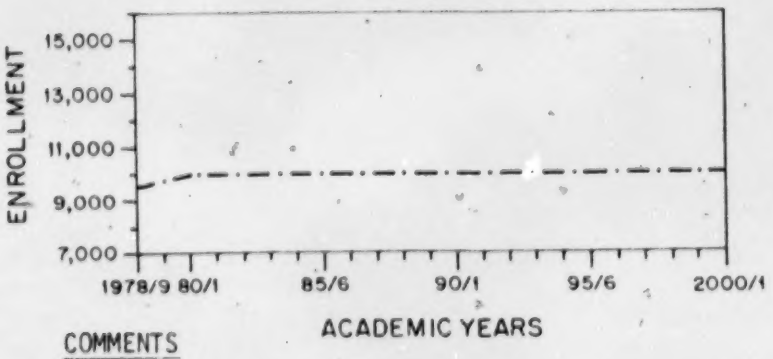
Space Type	Square Footage Required	Cost
Classroom	11,673	$ 637,000
Library	69,968	5,465,000
Physical Education	12,718	1,074,000
TOTAL		$7,176,000

Dormitory Occupancy	3690
System Capacity	3713
Spaces Required (surplus)	(23)

Library Acquisition Funds -- $561,529

Student Credit Hours generated	136,974
Full Time Equivalent Faculty positions	492.21
FTE Classified Staff positions	526.06
FTE Administrative Exempt positions	68.53

PROJECTED ANNUAL AVERAGE ENROLLMENTS



Since we are very close to achieving this enrollment level, new admissions procedures would have to be implemented quickly in order to hold enrollment down. It would mean rejecting (in 1980) approximately 180 students who would have been accepted under current policies. This number would rise to 660 by 1985, then drop to 350 until 1995 when it would again rise to a maximum of 1,100 by the year 2000.

COMMENTS

If our population forecasts are accurate, this enrollment scenario would require a slight raising of standards. The potential student pool is large enough that enrollment would reach 10,000 by 1982. From that time forward the enrollment level would be more or less constant. Resources would have to be considered as stabilized inputs, change coming only through internal reallocation or special funding sources. Departmental competition for students would increase. The Physical Plant would change little, but some small capital renovations could be expected. Some conflict with the Council for Postsecondary Education's goals for the University should be expected, but would be significant only if the state's population increases more rapidly than predicted. As with Scenario I, a rise in program quality could be used to offset

state-level expectations that Western would serve more students. Goals of responsiveness and diversity would supercede a goal of access.

This would leave a configuration very close to what we have now. Presently growing units such as the College of Business and Economics would have to adopt policies to limit their enrollments. New programs would be developed by transferring funds and/or faculty positions from existing programs.

Although no significant changes in admissions policy would be required to maintain this level of enrollment, we would be required to vary admissions standards on a regular basis to achieve freshman and transfer groups of a specific size. Such measures are presently used by the University of Washington.

This enrollmentlevel of 10,000 would probably result in an approximate increase of 10% in the number of students applying for and qualifying for financial assistance. The federal college-based assistance of $2,000,000 would be distributed among this larger population of students. We would expect a 10% increase in both recipients and dollars provided to our students through the Basic Grant and the State Grant programs, as well as some increase in the dollars available for distribution under the Tuition and Fee Waiver Program. This enrollment level would probably result in higher utilization of institutional NDSL funds and might result in some reduction in the ratio of gift aid provided to our students as a proportion of total educational costs. Itwould probably also mean that we would have to discontinue accepting financial aid applications midway through the year.

SCENARIO III. UNREGULATED

Maximum Projected Enrollment Level of 11,100. This scenario assumes no management of enrollment, i.e., no change in present policies. It is now projected that under this assumption the maximum enrollment will be 11,108 in the academic year 2000-01. The following data characterize this scenario.

OPERATING BUDGET

Instruction	$17,201,000
Research	70,000
Public Service	83,000
Primary Support Serv	1,087,000
Libraries	2,118,000
Student Services	2,068,000
Institutional Support	3,926,000
Plant Oper. & Maint.	3,972,000
Sponsored Research	2,828,000
TOTAL	$33,353,000

CAPITAL CONSTRUCTION

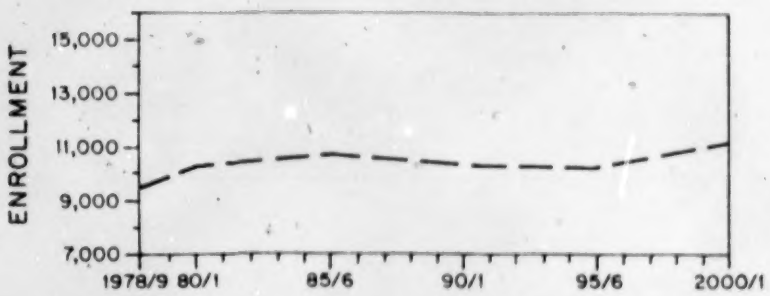
Space Type	Square Footage Required	Cost
Classroom	28,589	$1,561,000
Library	83,023	6,485,000
Physical Education	29,835	2,520,000
TOTAL		$10,566,000

Dormitory Occupancy	4099
System Capacity	3713
Spaces Required (surplus)	386

Library Acquisition Funds --$623,746

Student Credit Hours generated	152,150
Full Time Equivalent Faculty positions	546.75
FTE Classified Staff positions	547.34
FTE Administrative Exempt positions	76.13

PROJECTED ANNUAL AVERAGE ENROLLMENTS



This graph indicates the number of students we anticipate, assuming that Western will continue to draw the same proportion of the total population in each of seven age categories from every county in the state; that out-of-state and foreign enrollments will remain constant, while Canadian enrollments increase steadily; and that population projections from Olympia will be reasonably accurate.

COMMENTS

This would be the result of our current policies. Enrollment is determined by the number of students who meet Western's admissions criteria. Since over 95% of our students are residents of Washington State, then population trends for the State provide a good basis for enrollment predictions. Western's current analysis of county population trends predict an enrollment of 11,108 students at the turn of the century. Our analysis develops a participation ratio for each of seven age groups in each county in the State, a ratio is determined by comparing actual numbers of Western students from each county with population statistics for each county.

As a consequence OFM estimates are slightly lower than ours. This is one problem with unregulated enrollment: planning is limited to reaction techniques, and either we are dictated to by Olympia, or we must negotiate with Olympia for an acceptable enrollment level. The method does, however, provide a flexible means of adjusting the delivery of educational services for the State. Major planning responsibility is shifted to Olympia, but this campus gains a measure of safety by conforming to state plans. As long as enrollments rise, planning is easier since additional small increments of faculty are available each year. During a decline, however, the planning situation becomes more difficult since the number of faculty positions has to be reduced. As can be seen from the graph, we can anticipate slight gains for the next few years and then slight losses or a stable student body for the following ten years. Only in 1995 will the enrollment begin to increase again. It should be noted that the 1995 increase is pure speculation, since students born in 1977 would be entering Western that year, and the population forecasts we have used were developed in 1976.

The stable-to-slight-decline situation projected for this scenario indicates that programs will strongly influence outcomes. Since our model is based on participation ratios and the median age of the population is increasing, it assumes more older students on campus. This will not happen unless programs are more responsive to older people, or it may occur because this group will be large and articulate enough to demand changes.

Another variation of this scenario is one in which the growth is unregulated but the enrollment is not allowed to decline below a fixed amount. The 1985 enrollment is projected at approximately 10,700 students and can be considered as a possible lower limit. We would then follow all regular policies until 1985. During the next ten years efforts would be made to increase enrollment by roughly 300 students in order to maintain our "minimum" enrollment. This could be accomplished by use of the methods described in Scenarios IV and V. If the expected increase in students from 1995 through 2000 occurs, then Western's admission and retention policies would revert to their 1985 positions and would be adjusted only if total enrollment again dropped below the minimum.

The minimum level variation is by nature a reactive, rather than a projective planning technique. Reactive planning characterizes many institutions of higher education and works best when the rate of change in society is slow.

SCENARIO IV. ENROLLMENT LEVEL OF 12,000

This scenario would require an increase of 2,400 students above the 1978-79 level. The following data characterize this scenario.

OPERATING BUDGET

Instruction	$18,582,000
Research	75,000
Public Service	90,000
Primary Support Serv.	1,175,000
Libraries	2,288,000
Student Services	2,234,000
Institutional Support	4,241,000
Plant Oper. & Maint.	4,291,000
Sponsored Research	3,056,000
TOTAL	$36,032,000

CAPITAL CONSTRUCTION

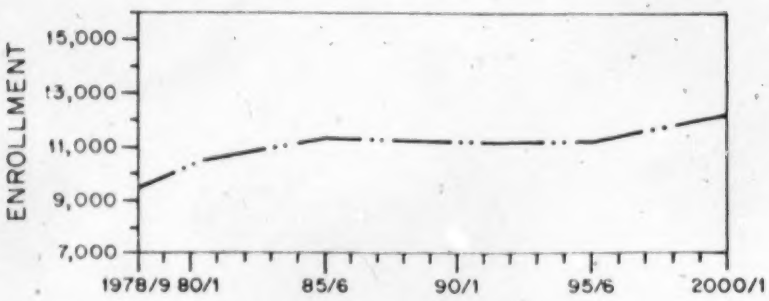
Space Type	Square Footage Required	Cost
Classroom	42,210	$2,305,000
Library	93,704	7,319,000
Physical Education	43,868	3,705,000
TOTAL		$13,329,000

Dormitory Occupancy	4428
System Capacity	3713
Spaces Required (surplus)	715

Library Acquisition Funds --$673,835

Student Credit Hours generated	164,369
Full Time Equivalent Faculty positions	590.66
FTE Classified Staff positions	564.46
FTE Administrative Exempt positions	82.24

PROJECTED ANNUAL AVERAGE ENROLLMENTS



To reach this enrollment level we would have to increase the proportion of the population who are Western students by 10%. This would raise the student body above the unregulated level by 210 students in 1980, 550 in 1985, 625 in 1990, 715 in 1995 and 900 by the turn of the century.

COMMENTS

A slight decrease in admissions standards would be one way of implementing this scenario. Some program changes could then be funded by growth, but only after the Legislature had been convinced to accept our goal and to fund us for the increased enrollment. The impact of lowered admissions standards is debatable. They may have no effect on our reputation or they could have a negative effect. (We could implement a provisional remedial program offered during the summer term, in the successful pattern of the University of Illinois at Chicago Circle, to offset any negative effects.) We would be reaching more "non-traditional," older, and minority students. If this enrollment goal is accepted, there would be the opportunity to add some courses and expand some departments, but the University would probably be less friendly and perhaps more bureaucratic.

It is possible that aggressive development of graduate programs could cause this goal to be achieved while holding the undergraduate student body approximately constant. Such an effort would require major shifts in departmental priorities and in financial support from Olympia. In some areas, it would also put us in direct competition with the State's research universities. Another means of reaching this enrollment level would be selective expansion of some programs. If enrollments in the College of Business and Economics, for example, were to more than double, Western's enrollment would reach 12,000.

Assuming acceptance of that enrollment level and recognizing that the current allocation system responds to growth, we could expect proportionate funding increases and pressures for a new academic building and a new dormitory. We could also expect that campus parking would be pushed to its absolute limits and that the need for new library and physical education facilities would be certain.

At least initially, lower admissions requirements would increase enrollment. In Fall Quarter 1978, 431 freshmen were denied admission because of high school grade point averages below the 2.50 minimum requirement and 267 transfer applicants failed to satisfy the required 2.00 minimum grade point average. Consequently, 698 applicants were informed that Western could not be of service to them and were re-directed to community colleges. Those nearly 700 students could have been admitted under different standards. It is also likely that under different standards potential students who did not apply would have. Enrollment can also be increased by improving retention rates. Every student who stays at Western is one more who does not have to be admitted to meet an enrollment goal.

Assuming proportionate increases in financial aid applicants and those eligible for financial aid, a 33% increase in our enrollment could have significant impact on Western's financial aid program, particularly in the short term. College-based funding (NDSL, SEOG, CWSP) would remain constant at approximately $2,000,000, and proportionate increases could probably be expected in Basic Grant recipients and dollars. Under this enrollment assumption, at least on a short-term basis, enrollment increases would no doubt begin to out distance any potential increases in funding from sources more directly related to enrollment levels (BEOG, WSNG, STFW). As a result, we would probably be unable to continue accepting financial aid applications throughout the academic year for programs other than the BEOG and would probably be unable to provide financial assistance (except BEOG) to students who completed applications for financial aid after September 1. This enrollment level would require maximum utilization of all available student aid resources, including NDSL.

SCENARIO V. ENROLLMENT LEVEL OF 15,000

This scenario would require an increase of 4,400 students above the 1978-79 level. The following data characterize this scenario.

OPERATING BUDGET

Instruction	$23,277,000
Research	95,000
Public Service	113,000
Primary Support Serv.	1,468,000
Libraries	2,860,000
Student Services	2,793,000
Institutional Support	5,301,000
Plant Oper. & Maint.	5,364,000
Sponsored Research	3,819,000
TOTAL	$45,040,000

CAPITAL CONSTRUCTION

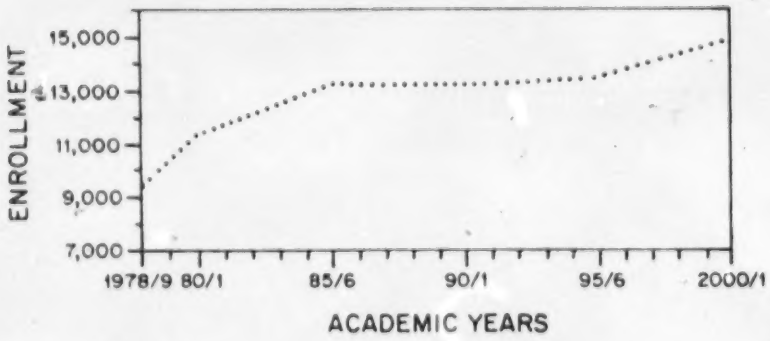
Space Type	Square Footage Required	Cost
Classroom	88,018	$4,807,000
Library	129,305	10,099,000
Physical Education	90,597	7,651,000
TOTAL		$22,557,000

Dormitory Occupancy	5535
System Capacity	3712
Spaces Required (surplus)	1823

Library Acquisition Funds --$842,294

Student Credit Hours generated	205,462
Full Time Equivalent Faculty positions	738.32
FTE Classified Staff positions	762.54
FTE Administrative Exempt positions	102.80

PROJECTED ANNUAL AVERAGE ENROLLMENTS



Achievement of this enrollment level would mean a 40% increase in our proportionate draw. This translates into an increase above our projections of 1,050 students in 1980, a 10% change. In 1985 the figures rise to 2,600 students and 25%. 1990 would bring 3,000 students, and by the year 2000 we would need to exceed projections by 35% and have 3,900 more students than our present policies would yield.

COMMENTS

A Western Washington University with 15,000 students would probably have to be an open admissions institution with a commitment to providing educational opportunity to anyone who wished to come. We would have remedial programs and probably have an extensive extension program. The Legislature would have to share this vision.

Major capital improvements would be required, as would probable street widenings or revisions in Bellingham's traffic patterns. Campus physical expansion would have to be to the south or crowded onto the buildable portions of the present campus. One or more parking buildings would be needed, and the policy of maintaining a "walking campus" would have to be altered or abandoned. Faculty and staff would increase, with the likelihood of a larger, more specialized administration. All departments would grow and some new ones would be created. The colleges might be more autonomous with differential admissions standards.

Specific programs that would be expected to grow include Business, Health Sciences, Technology, Fine and Performing Arts, graduate and off-campus activities. These are primarily high-cost programs and would require additional resources in order to produce the necessary expansion. We would become a major educational resource for Whatcom and Skagit Counties and dramatically increase our community involvement.

It is doubtful that Western could maintain an enrollment level of 15,000 without significant program changes designed to meet the needs of a sizeable new student population. Even with changes in admission standards, the current number of applications would not generate the necessary number of enrollees. This is because we currently accept 84% of all students who apply. Half of the students we admit actually enroll at Western. An enrollment of 15,000 implies a freshman class of 4177, or a 65% increase over current figures, which means that 76% of all students who were admitted would have to come to Western. This is not a reasonable assumption. Even if all students who applied were admitted, the proportion that actually enrolled would have to be 65%. Obviously this goal would require tapping new populations for students. Another factor to consider is that in a student body of this size, retention has a very significant impact on an institution's ability to maintain a high enrollment.

Availability of adequate student financial assistance resources would become critical with an enrollment of 15,000. College-based funds of $2,000,000 would be distributed as equitably as possible with priority given to students with greatest financial need. It is likely that students applying after the April 1 priority deadline for financial aid would receive only Basic Education Opportunity Grants and possibly Washington State Need Grants. With the early total commitment of funds it is likely that students applying after the deadline would not be able to attend. At both the 12,000 and 15,000 enrollment levels, college-based funds, particularly on a short-term basis, would be significantly less available than is currently the case. The availability of financial assistance could become a significantly more important factor of consideration for many students planning to attend Western. A proportionate decrease in financial aid would make it more difficult to attain this scenario.

SUMMARY AND CONCLUSION

Every attempt has been made to assure that each scenario has been presented in as unbiased a way as possible. There is no "best" scenario, except according to subjective criteria that each reader will apply. Each of the scenarios serves different educational and institutional goals. The comments for each scenario are not exhaustive. An alternative way of achieving Scenario I, for example, would be the elimination of Continuing Education courses. The primary purpose of this document is to illustrate some of the features of our institution for the specific enrollment levels so that a preliminary choice of scenarios can be made. Another exercise will provide more detail on the steps needed to reach a given enrollment.

The two tables in this section summarize change. Table I illustrates the percentage increase (or decrease) in each variable for each scenario. In Table II the Capital Construction requirements for each scenario are presented; however, please keep in mind that these are formula requirements. Our faculty is not funded at full formula and we have no assurances that buildings will be financed to meet a formula.

TABLE I

STATISTICAL SUMMARY

		Percentage Change by Scenario				
	Base	I	II	III	IV	V
Student Credit Hours	134,617	(19)	2	13	22	53
FTE Faculty	464.58	(15)	6	18	27	69
FTE Classified Staff	513.34	(5)	2	7	10	49
FTE Admin	64.19	(15)	7	19	28	60
Oper. Budget	29,616,000	(10)	13	25	35	69
Annual Average Students	9663	(17)	3	15	24	55

TABLE II

CAPITAL CONSTRUCTION SUMMARY

New Buildings Only

Cost by space type and scenario:

I.	Library	$3,611,000
II.	Classroom	637,000
	Library	5,465,000
	Physical Education	1,074,000
	TOTAL	$7,176,000
III.	Classroom	1,561,000
	Library	6,485,000
	Physical Education	2,520,000
	TOTAL	$10,566,000
IV.	Classroom	2,305,000
	Library	7,319,000
	Physical Education	3,705,000
	TOTAL	$13,329,000
V.	Classroom	4,807,000
	Library	10,099,000
	Physical Education	7,651,000
	TOTAL	$22,557,000

Square Footage Comparisons:

Space Type (Current Sq. Feet Available)	Scenario	New Space Required	% Increase	Size Comparable Bldg; Square Feet
Classroom (79,315)	II	11,673	15	LH 2,3,4; 13,562
	III	28,589	36	Humanities; 33,342
	IV	42,210	53	Edens; 50,412
	V	88,018	111	Bond; 89,591
Library (139,455)	I	46,235	33	Edens; 50,412
	II	69,968	50	Mathes; 75,381
	III	83,023	60	Bond; 89,591
	IV	93,704	67	Bond; 89,591
	V	129,305	93	Performing Arts Ctr; 128,649
Physical Education*	II	12,718	11	LH 2,3,4; 13,562
	III	29,835	26	Humanities; 33,342
	IV	43,868	39	Higginson; 47,241
	V	90,597	80	Bond; 89,591

* These estimates are based on the Illinois Formula which assumes recreational and intramural use of facilities. Under an academic use only formula, present facilities would be adequate under any scenario.

We are fortunate to be able to consider choosing our future. In most of the country an exercise of this type would be to pick the enrollment level at which the institution would stabilize its declining enrollment. Only continued in-migration allows Washington to escape this trend, but it gives us much more flexibility in the development of institutional goals and the means of achieving them.

The previous five enrollment scenarios describe five possible futures for Western. Although each scenario has its own distinctive features, there are several factors worth emphasizing which are common to most of them:

1. All of the scenarios are attainable. Obviously the amount of effort, the magnitude of the changes, and the amount of time needed to achieve the goals will differ with each scenario, but even Scenario V (15,000) is possible within 20 years if the decision is made soon and if the State would be willing to fund the expansion.
2. Any choice of a scenario which leads to a stable enrollment level will require the consent of the State Legislature. As part of its consent the Legislature would have to be willing to develop a new funding mechanism for Western. The present formula funding system, designed for a period of expansion, makes it difficult in a situation of stable or declining enrollments to maintain quality programs. If Western wishes to pursue a policy leading to a stable enrollment, alternative funding mechanisms will have to be developed for presentation to the Legislature.
3. Western will change in the next twenty years. The purpose of studying these scenarios is to try to determine and to control the amount and nature of that change. Given present trends, it is reasonably likely that a decision now as to the general nature of Western's future can lead to a realization of that future. Failure to choose a long-range

goal now, that is, to allow things to proceed without a specific future in mind, will limit our options and leave us with only short-range opportunities.

4. Total enrollment is a variable that can be controlled by varying the numbers of new students or the percent of those students who complete their degree requirements. Admissions standards can be used to adjust the number of new students, including both first-time students and transfer students. Attrition is another variable that can be controlled. Student persistence is known to be dependent upon many factors such as program difficulty, grading standards, time required to complete, cost, a feeling of identification with the institution, time spent with faculty, availability of financial aid, work on campus, living in a dorm and others which are under the University's control.[7] Policy decisions can be used to balance these variables in order to maintain attrition rates which would allow us to meet a chosen enrollment goal. Another step in enrollment management would move the manipulation of student persistence and admissions variables down to the college or even program level.

The purpose of this study is to engender a wide discussion on campus of the nature of Western Washington University during the next 20 years. It is hoped that from this discussion a consensus will emerge on which future will be the most appropriate for Western.

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[7] For a detailed treatment see Alexander W. Astin, Preventing Students From Dropping Out, Jossey-Bass, San Francisco, 1975.

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